

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-027325**Date Inspected:** 15-Mar-2012**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** jobsite**CWI Name:** Salvador Merino**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** SAS project**Summary of Items Observed:**

This Quality Assurance (QA) Inspector, Craig Hager was on site at the job site between the times noted above.

This QA Inspector was on site to randomly observe Quality Control (QC) personnel perform Non-Destructive Testing (NDT) and /or monitor American Bridge/Fluor (ABF) welding operations. This Quality Assurance (QA) Inspector, Craig Hager observed the following.

Orthotropic Box Girder (OBG) sections:

12W/13W-Longitudinal Stiffener (LS) Bottom Stiffener Flange (BSF): This QA Inspector observed ABF welding apprentice Devon Murphy using a grinder to grind the weld faces flush and transition the ends of the plates. This QA Inspector was present when QC Inspector Salvador Merino performed a visual inspection of the work. QC Inspector Salvador Merino marked several areas for grinding due to poor contour and informed ABF welding apprentice Devon Murphy of the issues, stating that not all areas were marked, but the ones that were are typical of the issues. QC Inspector Salvador Merino also informed ABF welding apprentice the ends of the plates did not appear to be transitioned properly due to the configuration of the Partial Joint Penetration (PJP) weld and the finished results after grinding. This QA Inspector observed ABF Engineer Dan Hester was present and QC Inspector Salvador Merino explained the issues at the end of the transitions. ABF Engineer Dan Hester looked at the transitions and informed QC Inspector Salvador Merino and this QA Inspector he was going to speak with Quality Control Manager (QCM) Jim Bowers about wrapping the welds at the ends for the transitions see photo below of transition area.

12E/13E-Longitudinal Stiffener (LS) Bottom Stiffener Flange (BSF): This QA Inspector randomly observed ABF

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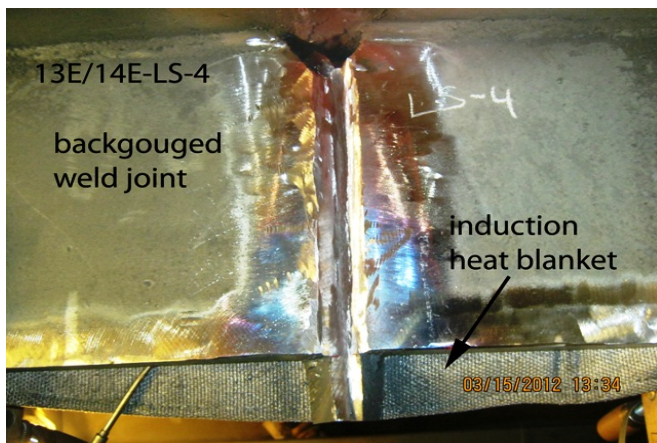
welding personnel Jeremy Dolman (#5042) using the Shielded Metal Arc Welding (SMAW) process to weld the North and South plates. The previous day this QA Inspector observed and documented the excessive root openings during the weld joint fit up of these weld joints. This QA Inspector informed Lead QA Inspector Danny Reyes of the observation that welding was being started prior to the issues being corrected and/or an answer to the pending RFI to be submitted by ABF and was informed to write an Incident Report documenting the issue. This QA Inspector observed QC Inspector Salvador Merino verify the following welding parameters; 127 amperes. This QA Inspector observed an E9018 electrode was being used and verified the preheat was greater than 200°F with a temperature indicating marker. This QA Inspector reviewed Welding Procedure Specification (WPS) ABF-WPS-D15-1162-4, being used by QC and observed the welding appeared to comply with the contract requirements. This QA Inspector randomly observed QC Inspector Salvador Merino perform Magnetic Particle Testing (MT) on the root pass of the welding above. The overall length of welding was the length of the induction heating blanket, approximately 1,250 mm of the total 1,500 mm length of weld.

13E/14E-Longitudinal Stiffener (LS): This QA Inspector randomly observed ABF welding personnel Richard Garcia (#5892) using the SMAW process to weld LS-4 weld joint. This QA Inspector randomly observed QC Inspector Salvador Merino verify the following welding parameters; 119 amperes. This QA Inspector used a temperature indicating marker to verify the preheat temperature was greater than 200°F and observed an E9018 electrode was being used. This QA Inspector reviewed ABF-WPS-D15-1012-3, being used by QC and observed the welding appeared to comply with the contract requirements. This QA Inspector randomly observed QC Inspector Salvador Merino perform and accept the visual and MT inspections on the back gouged weld joint. This QA Inspector performed a random visual verification and the work appeared to comply with the contract requirements, see photo below. This QA Inspector observed welding was approximately 80% completed on this weld joint this date.

F.W. Spencer: This QA Inspector observed F.W. Spencer personnel were not present this date, presumably due to the inclement weather (rain and high winds). QC Inspector Steve Jensen confirmed this observation this shift.

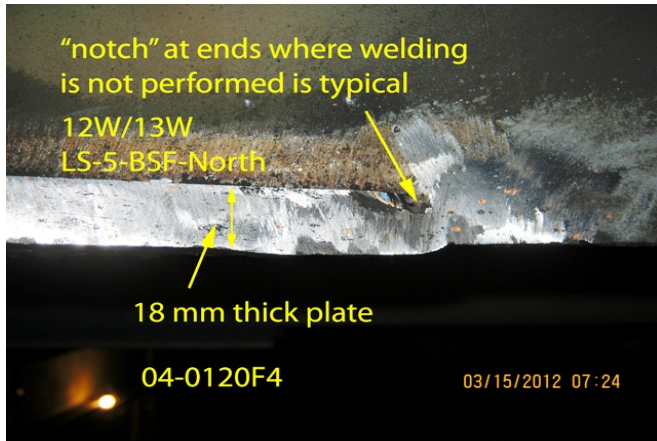
Summary of Conversations:

This QA Inspector had general conversations with American Bridge/Fluor (ABF) personnel, QC personnel and Caltrans personnel during the shift. Except as described above there were no notable conversations.



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Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy (510) 385-5910, who represents the Office of Structural Materials for your project.

Inspected By:	Hager,Craig	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer
